



GN-WLBZ201

**IEEE 802.11b USB STICK Storage/Wireless LAN
Card**

User's Manual

<http://www.gigabyte.com.tw>

Rev. 1.0 First Edition

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This device complies with FCC RF Exposure limits set forth for an uncontrolled environment, under 47 CFR 2.1093 paragraph (d)(2).

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Contents

| | |
|--|-----------|
| CHAPTER 1 PRODUCT OVERVIEW | 1 |
| 1-1. INTRODUCTION TO THE WIRELESS LAN CARD | 1 |
| 1-2. FEATURES | 1 |
| 1-3. PHYSICAL DIMENSIONS/PACKAGING..... | 1 |
| 1-4. LED INDICATING LIGHTS | 1 |
| 1-5. SYSTEM REQUIREMENTS | 2 |
| 1-6. SECURITY FUNCTION | 2 |
| CHAPTER 2 INSTALLATION OF WIRELESS LAN CARD | 3 |
| 2-1. INSTALLING THE DRIVER & UTILITY (WIN 98SE/2000/200 SP1/2000 SP2)..... | 3 |
| 2-2. INSTALLING THE DRIVER & UTILITY (WIN ME/XP/2K SP3....) | 5 |
| CHAPTER 3 UTILITY FOR WLAN | 9 |
| 3-1. INFO | 9 |
| 3-2. STATISTICS | 10 |
| 3-3. CONFIGURATION..... | 10 |
| 3-4. ENCRYPTION..... | 11 |
| 3-5. ADVANCED..... | 12 |
| 3-6. ABOUT..... | 13 |
| 3-7. ACCESS POINT (SUPPORTED UNDER WINDOWS XP) | 13 |
| 3-8. BRIDGE SETUP (SUPPORTED UNDER WINDOWS XP) | 15 |
| 3-9. IP SHARING (SUPPORTED UNDER WINDOWS 2000)..... | 17 |
| CHAPTER 4 UTILITY FOR STORAGE | 19 |
| 4-1. SECURITY APPLICATION PROGRAM | 20 |
| 4-2. SET / CHANGE PASSWORD | 20 |
| 4-3. DISABLE (REMOVE) PASSWORD | 23 |
| 4-4. UNLOCK DEVICE..... | 24 |
| 4-5. PASSWORD HINT | 24 |
| CHAPTER 5 SPECIFICATION | 26 |

Chapter 1 Product Overview

1-1. Introduction to the Wireless LAN Card

WLBZ201 is designed for product differentiation with 32M/128M Bytes Flash memory for data backup。This wireless Local Area Network (LAN) card is composed of the IEEE 802.11b MAC with USB STICK interface、Baseband、radio components and two built-in antennas。This product adopts the direct sequence spread spectrum (DSSS) technology using the DBPSK、DQPSK、and CCK modulations to provide a very stable wireless communication quality and an excellent signal receiver capability。

This product features the compact size、low power consumption and power management functions and provides a high-speed wireless data communication。Therefore this product is ideally suitable for being integrated into the personal mobile and handheld platform。

1-2. Features

- Flash Memory 32Mbytes /128Mbytes.
- Two dimensional rotation of maximum 180 degree.
- Conforms to IEEE 802.11b specification.
- Transmits data rate up to the maximum speed of 11Mbps.
- Dynamically scales the data rate to 11, 5.5, 2, and 1Mbps.
- Host Interface USB.
- Built-in diversity antenna.
- Supports 64-bit /128-bit WEP encryption.
- Driver supports Windows 98SE/Me/2000/XP.
- Free Software Access Point.

1-3. Physical Dimensions/Packaging

Dimensions: 126mm* 25mm* 16mm

Before the installation procedures, please ensure the components are not damaged during the shipping. The shipment of the GN-WLBZ201 includes:

One GN-WLBZ201 Wireless LAN Card
One Installation CD (including User's Guide and Driver)
One User Guide

Please contact your local distributor or authorized reseller immediately for any missing or damaged components. If you require returning the damaged product, you must pack it in the original packing material or the warranty will be voided.

1-4. LED Indicating Lights

This wireless LAN card conforms to the USB standard. There are six LED-indicating lights One indicates R/W status. One indicates Link status and the others indicate the intensity

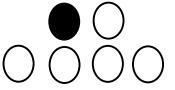
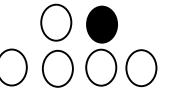
of received signals.

● **R/W:** This LED is blinks quickly when the card is flash memory Read or Write.

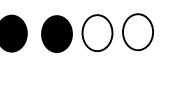
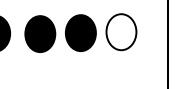
* To prevent data loss and/or damage to WLAN Card, never remove WLAN Card from the USB port while data is transferring.

● **Link:**

| | |
|------------------|--|
| Blinking Slow | The card is scanning the network. |
| Continuously On | The card is successfully connected to a network. |
| Blinking Quickly | The data is being transmitted/received |

| | | |
|------------------|---|---|
| LED Light |  |  |
| Condition | R/W | Link |

● **Intensity of received signals:** This LED specifies the four conditions of “**POOR**”, “**FAIR**”, “**GOOD**”, and “**EXCELLENT**” .

| | | | | |
|----------------------------------|--|--|---|--|
| LED Light |  |  |  |  |
| Condition of the Receiver | POOR | FAIR | GOOD | EXCELLENT |

1-5. System Requirements

1-5-1. Supported Platform:

IBM PC/AT compatible computer

1-5-2. Supported Operation System:

Windows 98SE/Me/2000/XP

1-5-3. Software Access Point Supported Operation System:

Windows 2000/XP

1-6. Security Function

You only have SIX chances to enter password correctly. If you enter wrong password six times, it will automatically FORMAT your HDD part of your USB Disk. (All data will be lost)

Chapter 2 Installation of Wireless LAN Card

2-1. Installing The Driver & Utility (Win 98SE/2000/200 SP1/2000 SP2)

Step 1: Please push the switch towards the USB connector “”.

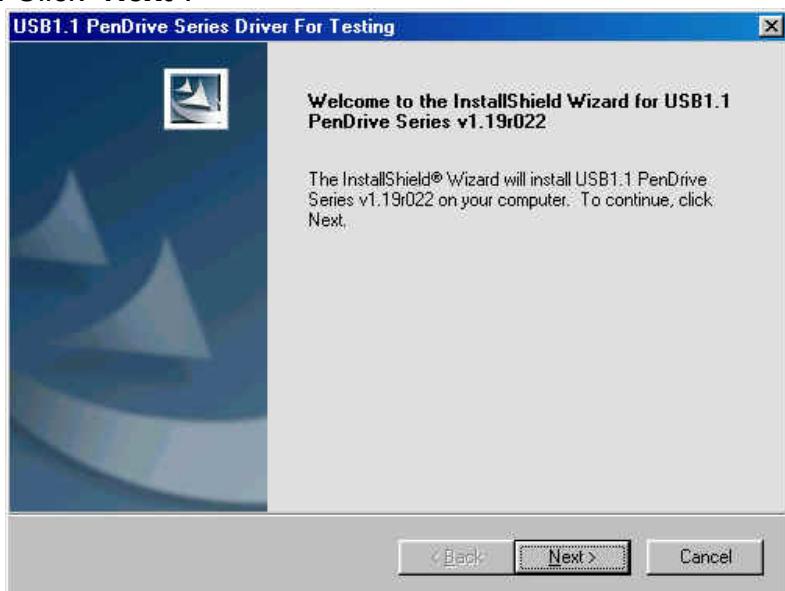
Step 2: Please make sure that you don't plug your card yet.

Step 3: Execute the autorun.exe on our CD, and then the following window will pop up.

Step 4: Click “**USB Disk Driver(Win98se/Win2k/Win2k + SP1 + SP2)**”.



Step 5: Click “**Next**”.



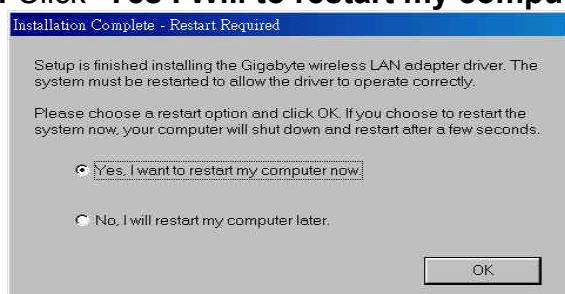
Step 6: Click “No, I will restart my computer later” and Click “OK” (Win 98SE).



Step 7: Click “Install Wireless LAN Driver”.



Step 8: Click “Yes I Will to restart my computer now”. Click “OK” (Win 98SE).



Step 9: Click “Yes” (Win 2K/ Win 2K + SP1,SP2).



Step 10: Please plug-in your “Gigabyte WLAN card device” Click “Yes” (Win 2K/ Win 2K + SP1,SP2).



2-2. Installing The Driver & Utility (Win ME/XP/2K SP3....)

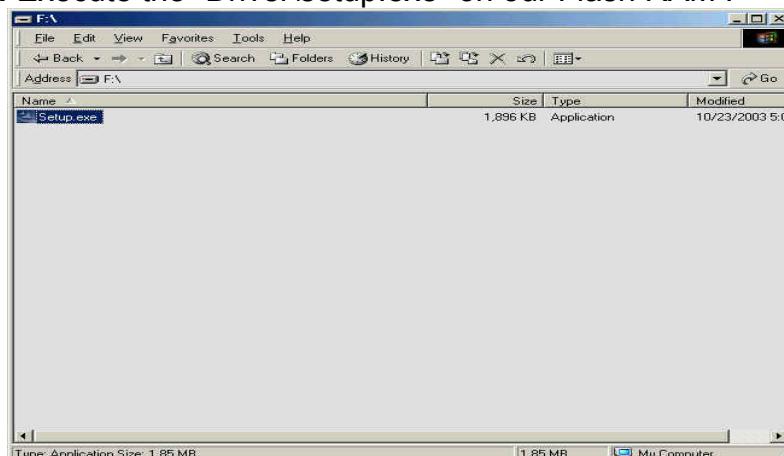
Step 1: Please push the switch towards the USB connector “”.

Step 2: Please plug-in your “Gigabyte WLAN card device” waiting 15~30 second.

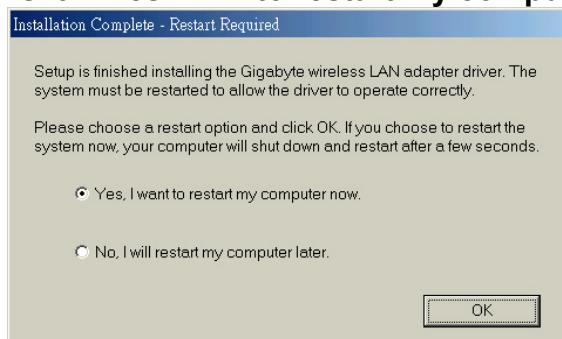
Step 3: Add New Hardware Wizard, Click “Cancel”.



Step 4: Execute the “Driver\setup.exe” on our Flash RAM .



Step 5: Click “Yes I Will to restart my computer now”, Click “OK” Reboot (Win ME).



Step 6: Click “Continue Anyway” (Win XP) .



Step 7: Replug-in “Gigabyte WLAN card device” , Click “Next” (Win XP) .



Step 8: Click “Continue Anyway” (Win XP) .



Step 9: Click “Finish” (Win XP) .



Step 10: Click “Yes” (Win 2000 SP3.....).



Step 11: Replug-in “Gigabyte WLAN card device” Click “Yes”, and then your installation is ok (Win 2000 SP3.....).



Chapter 3 Utility for WLAN

The Configuration & Monitor Utility is a powerful application that helps you to configure the card and monitor the statistics of the communication link. Unlike the standard method of configuring the card via the operating system utilities (e.g. Control Panel), this application permits the dynamic modification of the configuration parameters while the card is operating. It also offers some more configuration options. It appears as an icon on the Windows system tray whenever the card is running (see **Figure 3-1**). The icon can tell you the received signal strength by four small green lights. You can open it by double-clicking on this icon.

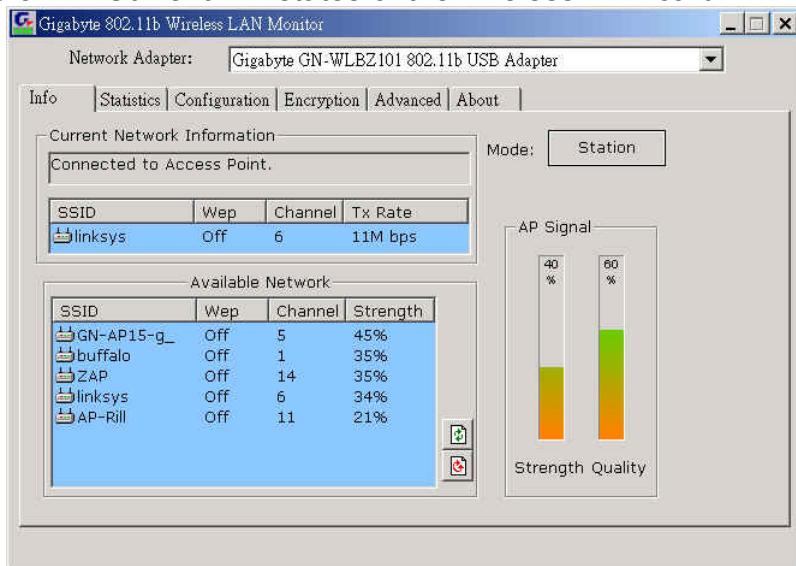
Figure 3-1. The icon of the Configuration & Monitor Utility



3-1. Info

The Info tab shows you the current Link States of the Wireless LAN Card and the Reachable Assess Points and the Wireless LAN Card(see **Figure 3-2**).

Figure 3-2. Current link states of the wireless LAN card



Network Information: There are three states of a Wireless LAN Card:

1. Connected to Access Point: The wireless LAN card is now connecting to an Access Point.
2. Connected to Ad Hoc: The wireless LAN card is now connecting to a Peer-to-Peer network.
3. Connecting: The wireless LAN card is now searching for an Access Point or wireless LAN card with the same network name, or SSID for the connection.

Other items in the table are the detailed information about the link state, which are available only when the wireless LAN card is connected to an access point or other wireless LAN card.

SSID: Network name.

Channel: The current channel used by the wireless LAN card.

Tx Rate: The current transmission rate used by the wireless LAN card.

AP Signal: It shows the signal quality and signal intensity of the currently connected base station.

Available Network: This item will show you all of the 802.11 Access Points or Wireless LAN Cards in your wireless environment. The icon in the front of every item represents an Access Point or a Wireless LAN Card. You can add a network easily by clicking on the desired SSID.

Strength: It shows the signal quality and signal intensity of the currently connected base station.

Signal Quality: It is which represents the quality of communication between the Wireless LAN Card and Access Point.

Refresh(): After this button is clicked, the wireless LAN card will rescan the wireless environment and show you all the updated reachable Access Points and Stations.

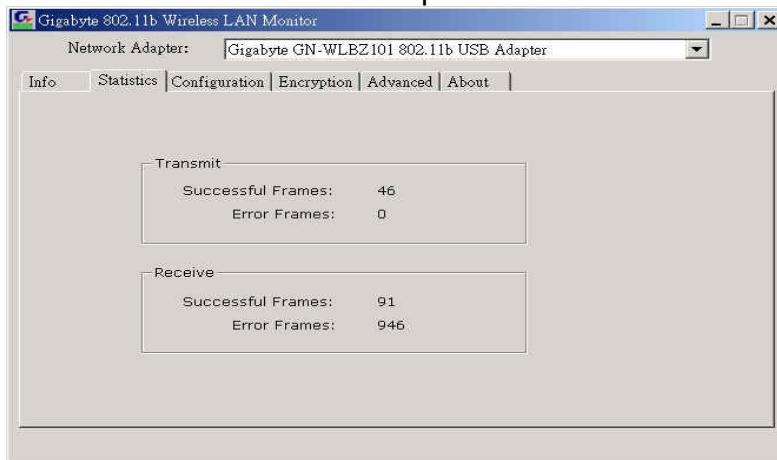
Connect(): After this button is clicked, the wireless LAN card will connect the wireless environment reachable Access Points or wireless LAN card.

Mode(Station): The WLAN mode, You can change AP mode(see **3-7 Access Point**) by clicking on this button.

3-2. Statistics

The “**Statistics**” tab shows you the number of packets sent and received by the card(see **Figure 3-3**).

Figure 3-3. The statistic number of packets sent and received by the card

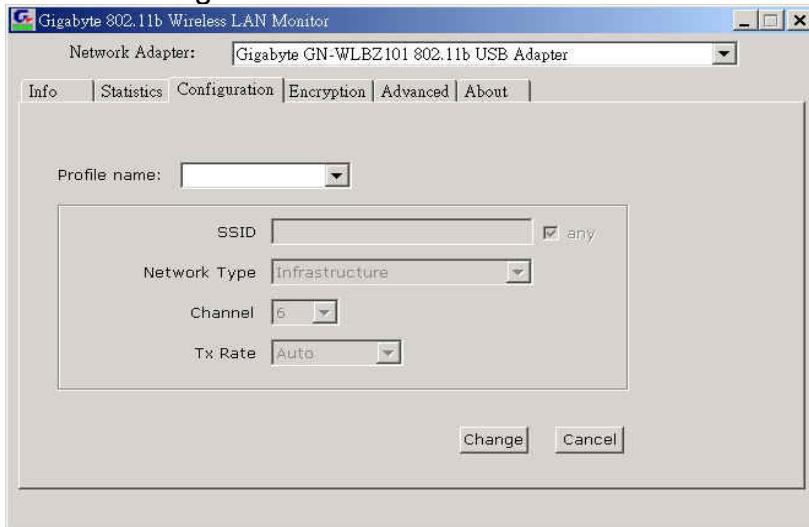


3-3. Configuration

The Configuration Tab contains several fields where operating parameters of the driver

can be viewed or changed. Changes to any of the parameters in this panel can be applied to the driver without resetting the wireless LAN card (see **Figure 3-4**).

Figure 3-4. Configuration



Profile: You can save various wireless settings for different environments.

Change: Press this button to set the configuration in each field of the panel. The “Apply” button should be pressed before the default values are saved to the driver and registry.

Cancel: Press this button to restore the default value in each field of the panel.

SSID: It is the unique name shared among all access points (**Infrastructure**) or **Ad Hoc** (wireless LAN card) in the wireless network. The SSID must be identical for all points in the network for sharing information and communication. It is case sensitive and must not exceed 32 characters.

Network Type: This field allows you to select the network type from a list of supported Network “Modes”. The modes displayed have two values: “Ad Hoc” (Peer-to-Peer) and “Infrastructure” (Access Point).

Ad Hoc: This is the 802.11 peer-to-peer mode of operation. All communications are done from Client to Client without using the base station. Peer-to-Peer networking uses the same SSID for establishing the wireless connection.

Infrastructure: This mode of operation requires the presence of an 802.11 Base Station. All communications are done via the Base Station, which relay packets to other wireless Clients in the BSS as well as the nodes on a connected network such as Ethernet.

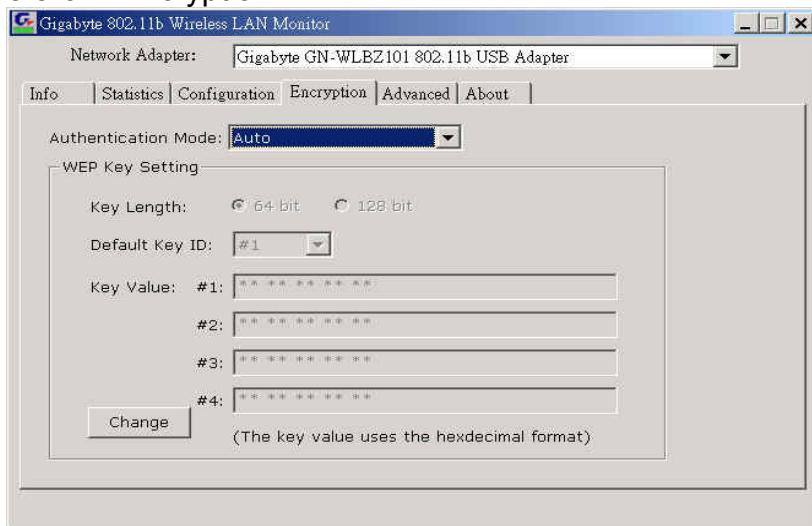
Channel: This specifies the channel used in wireless communication and should be set to the same channel as the other points in the wireless network. This setting can only be adjusted in Ad Hoc mode.

TX Rate: The transmission rate for transmitting data packets at the user end. You may set the transmission rate to 1Mb, 2 Mb, 5.5 Mb, 11 Mb, or Fully Automatic.

3-4. Encryption

To prevent unauthorized user to access the data on wireless stations, the Wireless LAN Card offers a highly secure data encryption, known as WEP (Wired Equivalent Privacy). If you require high security in transmission, go to the **Encryption** tab and set it up as follows (see **Figure 3-5**).

Figure 3-5. Encryption



Change: Press this button to set the configuration in each field of the panel. The “Apply” button should be pressed before the default values are saved to the driver and registry.

Key Length: select either 64bit or 128bit encryption method.

64 Bit –Allows wireless LAN card to encrypt data with the 64-Bit encryption algorithm.

128 Bit –Allows wireless LAN card to encrypt data with the 28-Bit encryption algorithm.

The **Encryption** tab enables you to identify up to 4 different encryption passwords and select one of them to encrypt your transmission data. The password of your choice may either be:

For 64-bit encryption:

- Five alphanumeric characters in the range of “a-z”, “A-Z” and “0-9” (e.g. MyKey)
- 10 hexadecimal values in the range of “0-F” (e.g. 11AA22BB33).

For 128-bit encryption:

- 13 alphanumeric characters in the range of “a-z”, “A-Z” and “0-9” (e.g. WEP encryption).
- 26 hexadecimal values in the range of “0-F” (e.g. 11AA22BB33123456789ABCDEFF).

you have the option to select whether *Open System*, *Shared Key*, or *Auto* authentication will be used. In order to take effect the changes you wish to make, click the “**Apply**” button at the bottom of the screen.

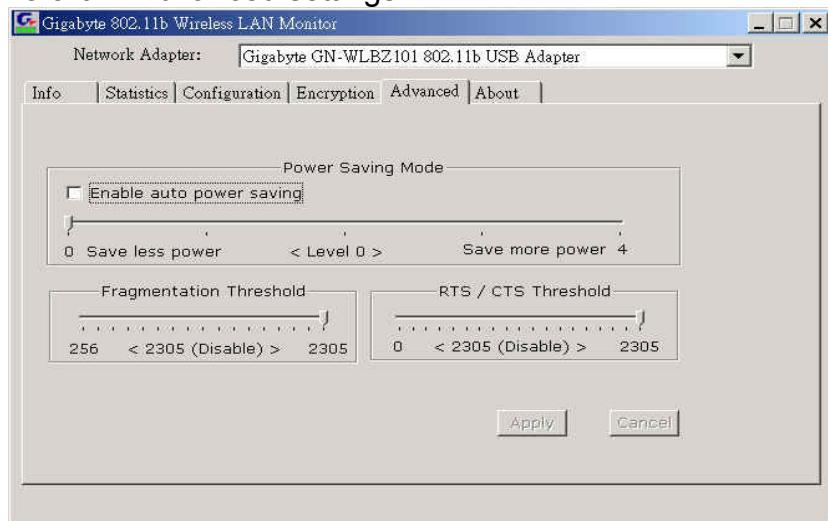
3-5. Advanced

By Choosing the *Advanced* option in any of the two modes, you can change advanced configuration settings, such as the Fragmentation Threshold, and RTS/CTS Threshold

(see **Figure 3-6**). **Figure 3-6** shows the default configuration for the advanced settings.

Note: In order to enable the Fragmentation and the RTS/CTS Threshold parameters move the slide bar with your mouse and then use the right and left arrow keys of your keyboard in order to select an exact number.

Figure 3-6. Advanced settings



3-6. About

By choosing this option, you can view basic information about the utility like the Driver, Firmware and Application Version and this adapter's MAC address(see **Figure 3-7**).

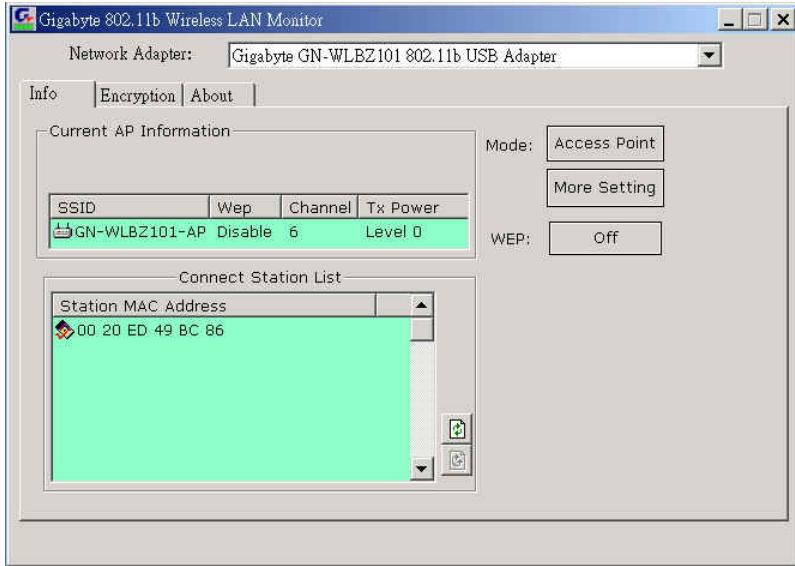
Figure 3-7. Version information and MAC address



3-7. Access Point (*Supported under Windows XP*)

The Info tab shows you the current Link States of the Assess Points and the Wireless LAN Card (see **Figure 3-8**).

Figure 3-8. Current link states of the Access Point Mode

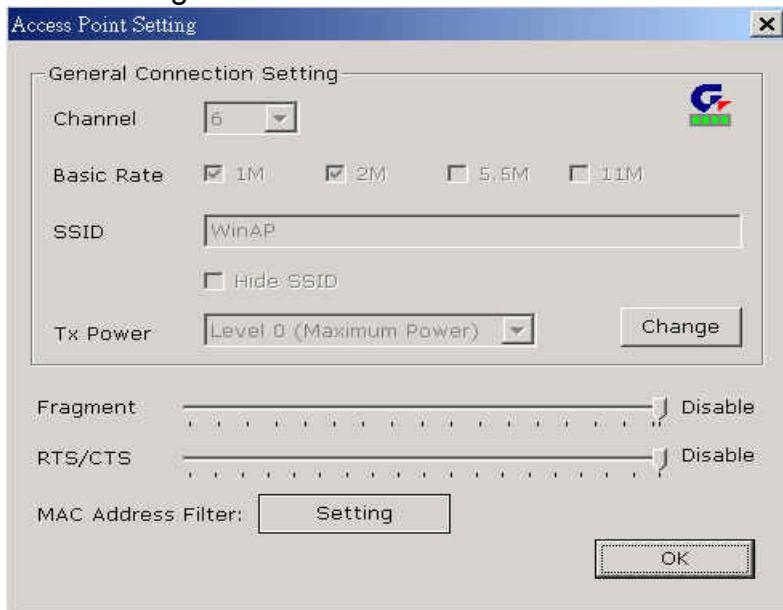


Access Point: The AP mode You can change WLAN mode(see **3-1 Info**) by clicking on this button.

More Setting: You can set the configuration Access Point(see **Figure 3-9**) by clicking on this button.

WEP(ON/OFF): You can using WEP (Wired Equivalent Privacy) by clicking on this button.

Figure 3-9. configuration of the Access Point Mode



Change: Press this button to setting the default value in each field of the panel. The “Apply” button should be pressed before the default values are saved to the driver and registry.

Channel: The current channel used by the Access Point.

Basic Rate: The transmission rate for transmitting data packets at the user end. You may set the transmission rate to 1Mb, 2 Mb, 5.5 Mb, 11 Mb.

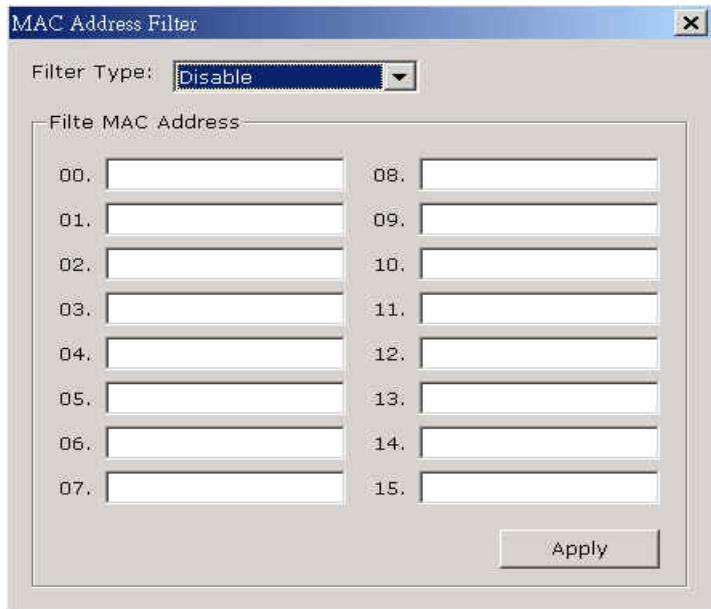
SSID: Network name.

Hide SSID: Access Point disable their SSID broadcasting to prevent a wireless device from finding and accessing their networks.

Tx Power: Transmitter Output power.

MAC Address Filter: You can set the configuration MAC Address Filter(see **Figure 3-10**) by clicking on this button.

Figure 3-10. MAC Address Filter



Filter Type: There are three status of a Access Point:

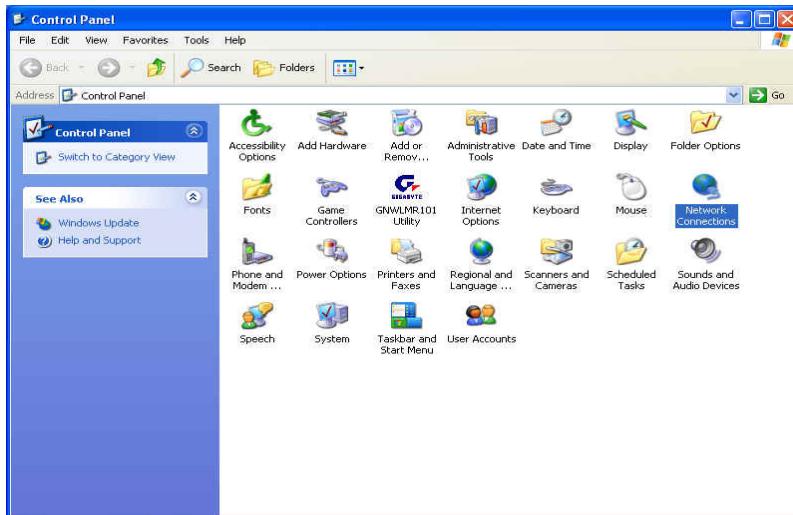
1. **Disable:** The Filter MAC Address function disable.
2. **Accept:** The Filter MAC Address (wireless LAN card) can connect to a Access Point.
3. **Reject:** The Filter MAC Address (wireless LAN card) can't connect to a Access Point.

3-8. Bridge Setup (Supported under Windows XP)

Step 1: Change to AP mode (see **Figure 3-8**).

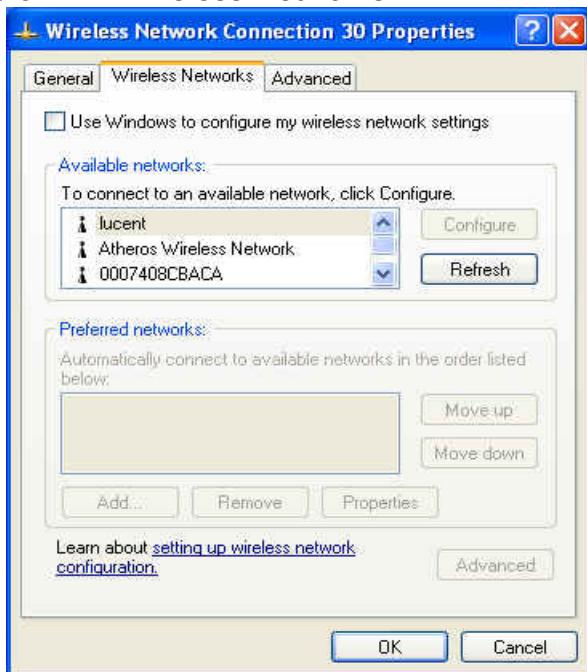
Step 2: 「Control Panel」 run 「Network Connections」 (see **Figure 3-11**).

Figure 3-11. Control Panel



Step 3: Setup Wireless LAN card(see *Figure 3-12*), Click "Use Windows to configure" to cancel the schedule and Click 「OK」.

Figure 3-12. Wireless Networks



Step 4: Select the network connections to be bridged. Press the 「Ctrl」 key while clicking the network connection icons to select. Right-click on any selected network icon. Select 「Bridge Connections」 (see *Figure 3-13*). Show Network Bridge(see *Figure 3-14*).

Figure 3-13. Bridge Connections

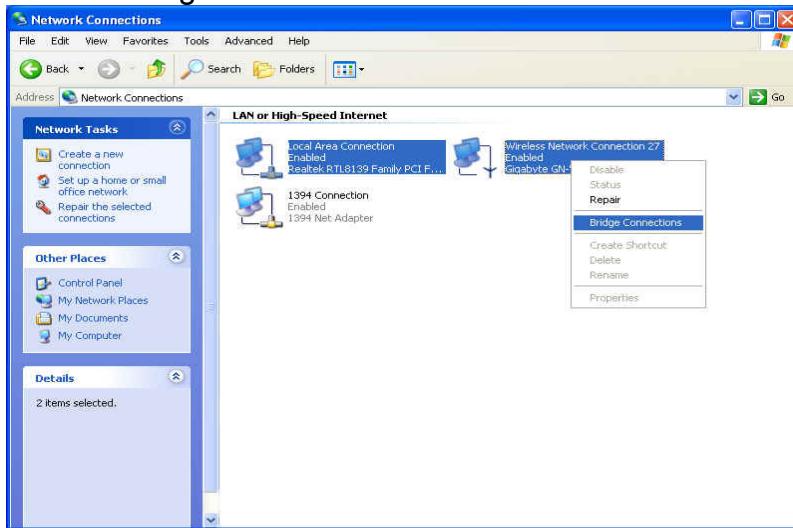
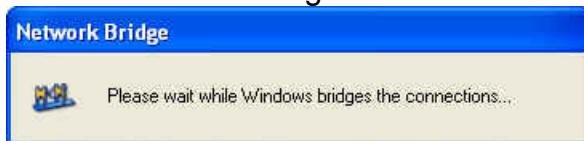
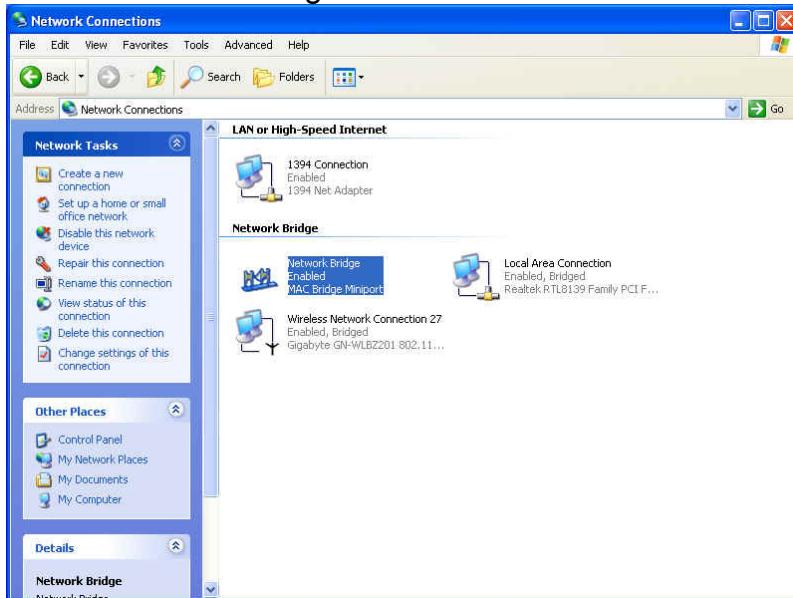


Figure 3-14. Network Bridge



Step 5 : Setup OK , Show Network Bridge windows(see **Figure 3-15**) and then your setup is ok.

Figure 3-15. Network Bridge Enabled

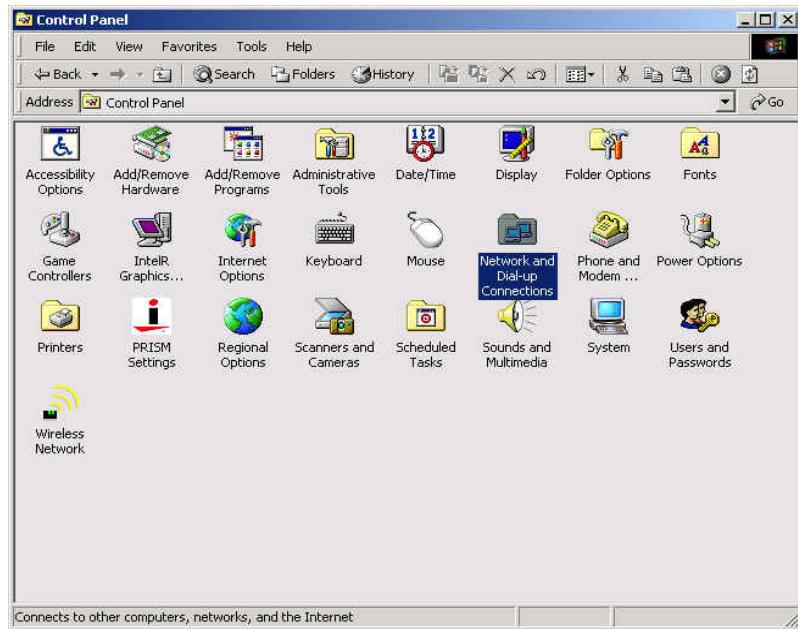


3-9. IP Sharing (Supported under Windows 2000)

Step 1: Change to AP mode (see **Figure 3-8**).

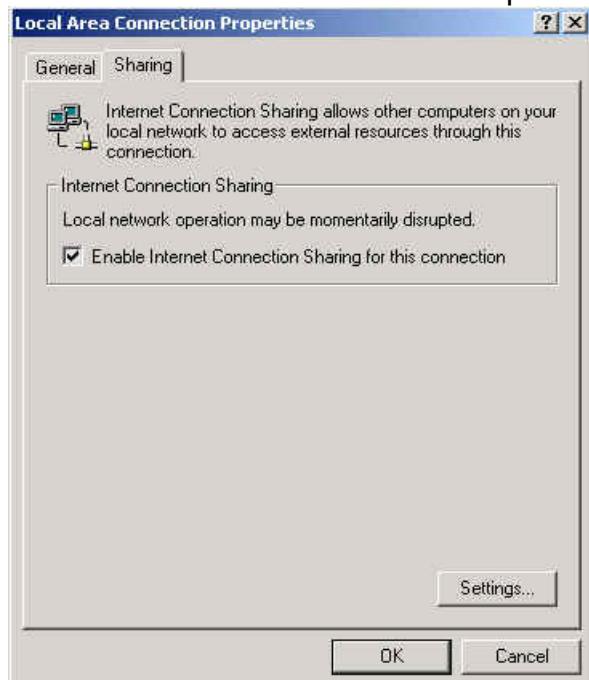
Step 2: 「Control Panel」 run 「Network and Dial-up Connections」 (see **Figure 3-16**).

Figure 3-16. Control Panel



Step 3: Setup LAN card(see *Figure 3-17*), Click "Enable Internet Connection Sharing for this connection" and Click 「OK」 .

Figure 3-17. Local Area Connection Properties



Step 4 : Show Local Network(see *Figure 3-18*). Click 「OK」 and then your setup is ok.

Figure 3-18. Local Network

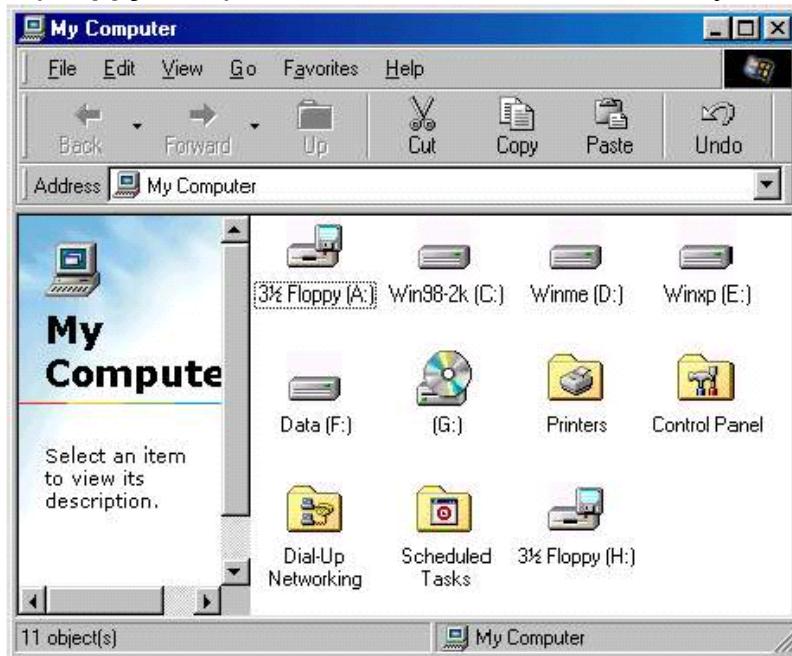


Chapter 4 Utility for Storage

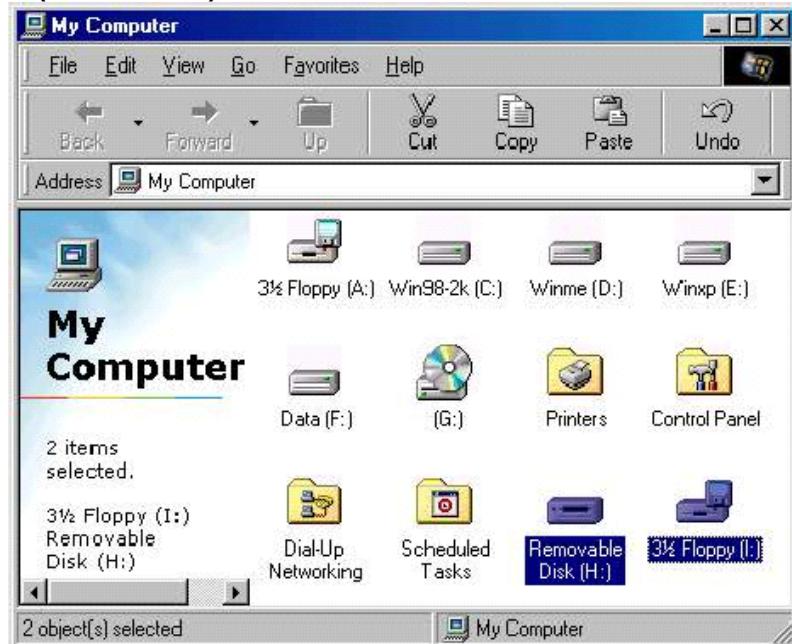
Your personal data in USB Disk can be secured. USB Disk has some new features. Unlike normal USB Disk, this USB Disk has been partitioned into two partitions, for which one of the partitions is 1.44MB, same size as a floppy disk; and depending on the flash memory, the rest of the capacity is allocated for normal use (shown below).

Two Positions

(1) **FDD (Floppy Disk) state.** Push the switch back, away from the USB connector “”.



(2) **HDD (Hard Drive) state.** Push the switch towards the USB connector “”.



Security Features

1. Allows users to set their own password (**maximum 16 characters**).
2. Allows users to enter “Password Hint”, in case users forgot about their password (**maximum 32 characters**).

3. Automatically format the HDD part of the USB Disk when enter wrong password 6 times consecutively.

4-1. Security Application Program

The main screen of security application program on FDD is shown in **Figure 4-1**.

Figure 4-1. Main Screen



A : Set / Change password

B : Disable password

C : Unlock Device

D : Password Status – tells you whether a password has been set or not

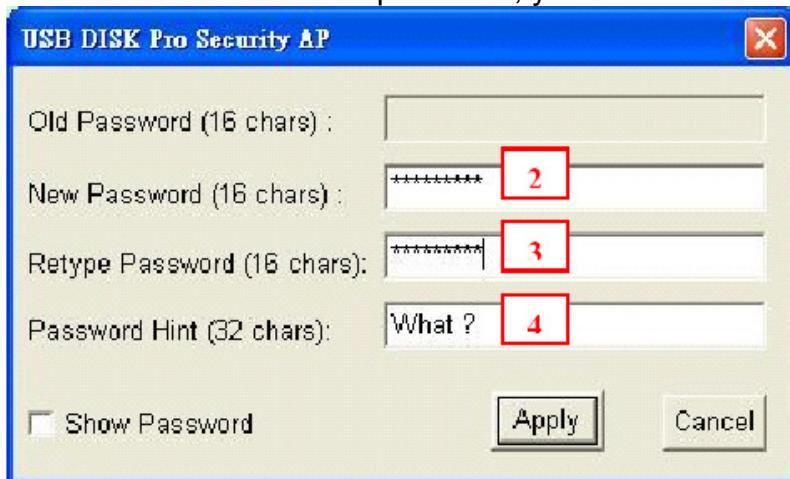
E : Device Status – tells you whether the device is locked or unlocked

F : Forgot Password ? – don't worry, let password hint remind you

4-2. Set / Change password

SET PASSWORD

(1) Press "Set Password" to set password, you will see the following screen..



(2) Enter a password of your choice (maximum 16 characters long).

(3) Confirm password by re-entering the password you set in (2).

(4) Enter a hint of your own in case you forget your password. You can enter anything you want (maximum 32 characters long).

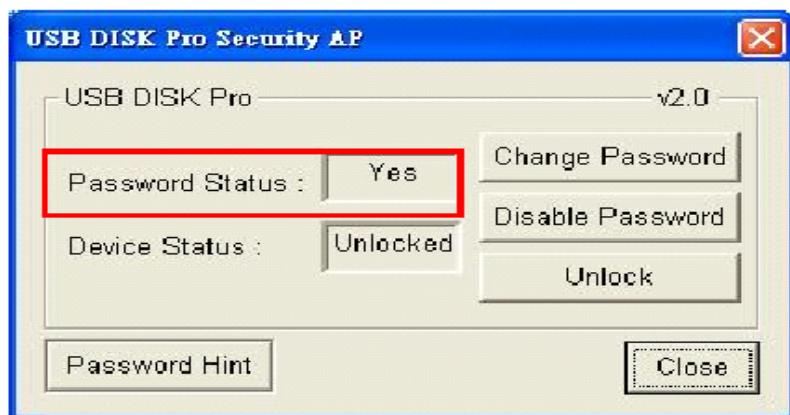
(5) Check “Show Password” box to see what you have entered.



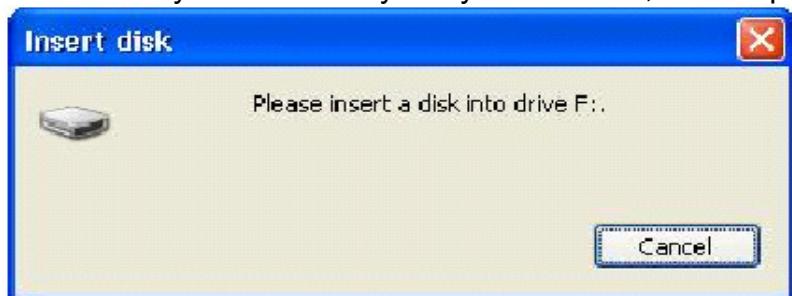
(6) Press “Apply” to confirm changes. The following message window will pop up. This message window tells you that the device will be automatically locked after you remove the device from USB port.



(7) Once you have set the password correctly, you will notice the change in “Password Status”.



(8) When you remove the device from USB port and re-insert it again, the device will automatically be locked. If you try to access it, it will reply with error message.



(9) If you execute the Security AP, you will see that the device is LOCKED.

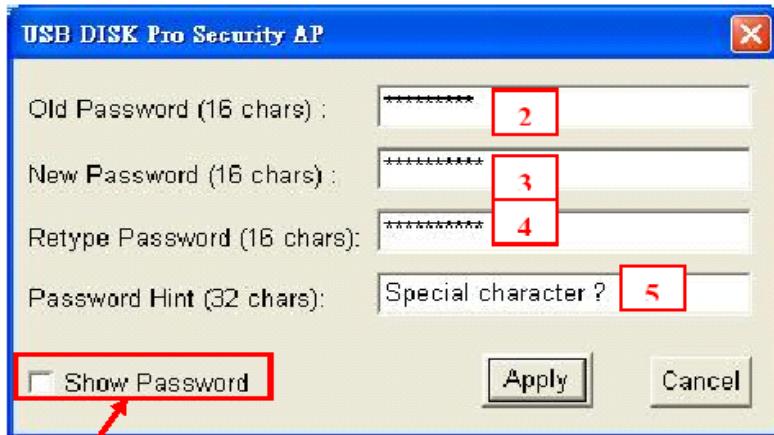


Change PASSWORD

(1) If you have already set a password before, you can change the password you set. Click "Change Password" to change.



- (2) Enter your current password
- (3) Enter a new password of your choice
- (4) Confirm the new password by re-typing it
- (5) Change password hint if you wish, otherwise it will keep the old password hint.
- (6) Password Hint does not have to enter/change, if you don't want to use it.
- (7) Password Hint can only be edited with new password. i.e., Password Hint can not be edited / changed without change of password.
- (8) Use "Show Password" to see what you have typed.

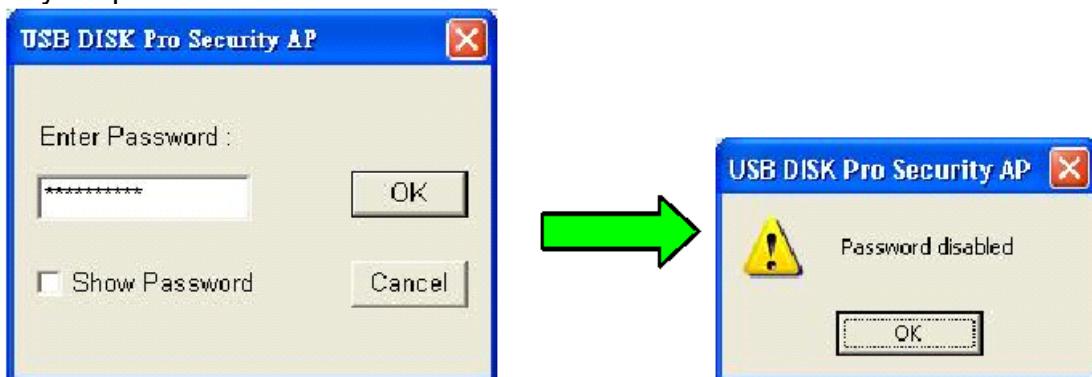


4-3. Disable (Remove) password

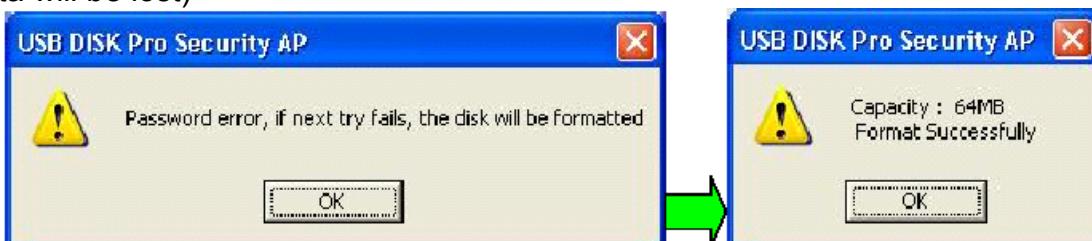
(1) If you no longer want to use the password, select "Disable Password" to remove it.



(2) Enter your password.

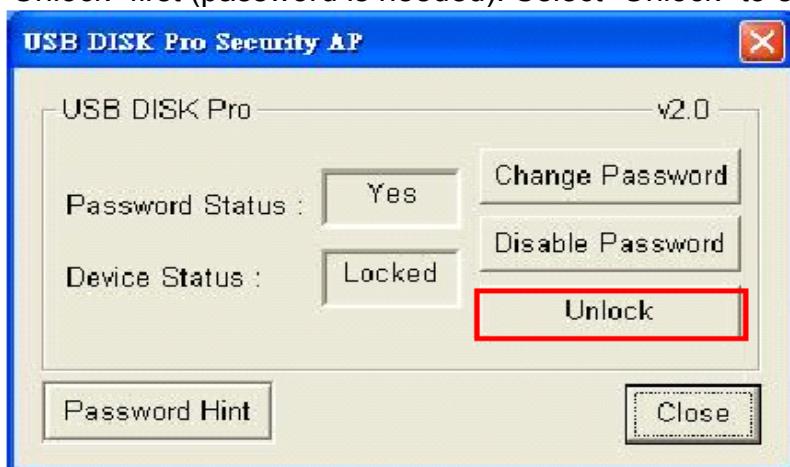


(3) You only have SIX chances to enter password correctly. If you enter wrong password six times, it will automatically FORMAT your HDD part of your USB Disk. (All data will be lost)

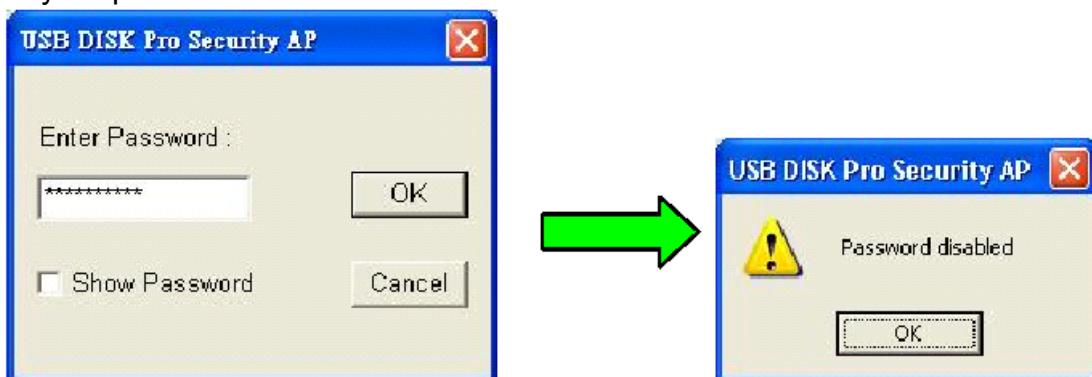


4-4. Unlock Device

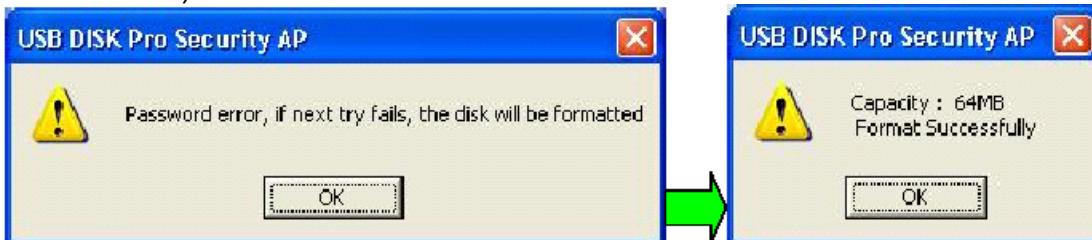
(1) If you have set a password, before you can access the HDD part of the USB Disk, you must “Unlock” first (password is needed). Select “Unlock” to enter password.



(2) Enter your password.



(3) You only have SIX chances to enter password correctly. If you enter wrong password six times, it will automatically FORMAT your HDD part of your USB Disk. (All data will be lost)



4-5. Password Hint

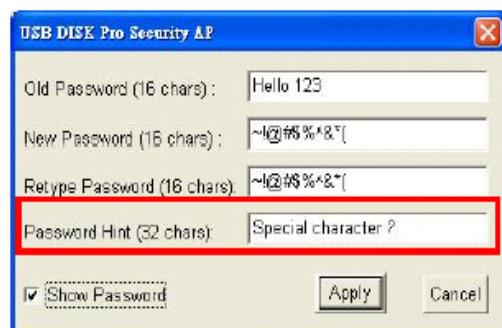
As a human being, we all forget things from time to time, so when you set/change your password, you can also edit a “Reminder” of your choice, in case you forget your password.

(1) Enter a hint of your choice (maximum 32 characters long). You can edit the hint only when you

Setup Password

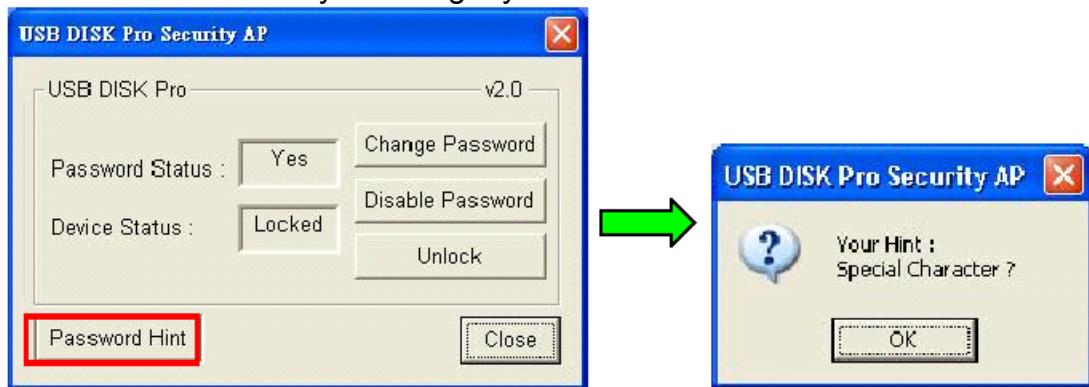


Change Password



OR

(2) Press "Password Hint" any time to get your reminder.



Chapter 5 Specification

| System | | |
|---|--|---|
| Flash Memory | 32Mbytes /128Mbytes | |
| Standards | IEEE 802.11b compliant | |
| Host Interface | USB1.1 | |
| Modulation | 1Mbps: DBPSK; 2Mbps: DQPSK; 5.5 and 11 Mbps: CCK | |
| Data Rate | 1, 2, 5.5, 11 Mbps | |
| Operating Voltage | 5V | |
| Power | Tx 340mA; Rx 300 mA; Sleep 90 mA | |
| Operating Range | Outdoor: 100 - 300m; Indoor: 30 - 100m | |
| RF | | |
| Frequency Band | 2.400 ~ 2.484 GHz (subject to local regulation) | |
| Radio Technology | DSSS (Direct Sequence Spread Spectrum) | |
| Number of Channel | 11 Channels (US, Canada) | 4 channels (France) |
| | 14 Channels (Japan) | 13 Channels (Most European countries, ETSI) |
| Peak Output power | 15dBm@ Nominal Temp Range | |
| Receive Sensitivity | - 80dBm @ 11 Mbps date rate, 8% PER | |
| Antenna | one built-in Chip antenna | |
| Regulatory and Environmental Compliance | | |
| EMC certification | FCC part 15 (USA) | DGT (Taiwan) |
| | CE (Europe) | |
| Temperature Range | Operating: 0 ~ 50 degree C, Storage: -20 ~ 65 degree C | |
| Humidity | Max. 90% Non-condensing | |
| Software | | |
| Driver | Windows 98SE/ME/2000/XP | |
| Roaming | Full mobility and seamless roaming | |
| AP Function | Supported under Windows 2000/XP | |
| Security | 64 and 128 bit WEP | |
| Management Utility | Monitors the network situation. | |
| Mechanical | | |
| Dimensions | 126mm * 25mm * 16mm | |
| Weight | 27 ± 1 g | |
| Packaging | Generic, Gigabyte, private labeling optional | |
| LED indicators | Read/Write ,Link and intensity of received signals | |

Note: The specifications are subject to change without notice